



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
KATSUO KUMAGAI, ET AL. )  
Serial No. 10/629,117 ) Art Unit: 1623  
Filed: July 28, 2003 ) Examiner: G. Krishnan  
For: THERAPEUTIC AGENT FOR MASTITIS OF )  
LIVESTOCK AND METHOD FOR )  
TREATING MASTITIS USING THE )  
SAME AGENT )

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**INFORMATION DISCLOSURE STATEMENT**

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Commissioner for Patents  
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Alexandria, VA 22313-1450

Sir:

The citation of information on the attached Form PTO/SB/08 is made pursuant to 37 C.F.R. §§ 1.56, 1.97, and 1.98A copy of each cited item is enclosed unless stated otherwise hereinbelow.

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Elena S. Polovnikova, Ph.D. - Reg. No. 52,130

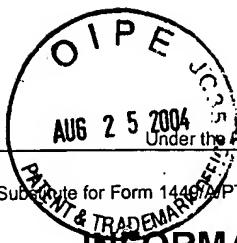
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Respectfully submitted,



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**Substitute for Form 1449A/PTO**

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1

of 2

Complete if Known

Application Number	10/629,117
Filing Date	July 28, 2003
First Named Inventor	KATSUO KUMAGAI
Group Art Unit	1623
Examiner Name	G. Krishnan
Attorney Docket Number	44471/288235

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent document, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

<p>Substitute for Form 1449/A/PTO</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)</p>		<b>Complete if Known</b>	
		<b>Application Number</b>	10/629,117
		<b>Filing Date</b>	July 28, 2003
		<b>First Named Inventor</b>	KATSUO KUMAGAI
		Group Art Unit	1623
		Examiner Name	G. Krishnan
Sheet	2	of	2
		Attorney Docket Number	44471/288235

<b>OTHER INFORMATION - NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	5	Fujisawa, Yumiko, <i>et al.</i> , "Glycyrrhizin Inhibits the Lytic Pathway of Complement – Possible Mechanism of Its Anti-Inflammatory Effect on Liver Cells in Viral Hepatitis," <i>Microbiol. Immunol.</i> , Vol. 44, No. 9, pp. 799-804 (2000)	
	6	Fukai, Toshio, <i>et al.</i> , "Cytotoxic Activity of Low Molecular Weight Polyphenols against Human Oral Tumor Cell Lines," <i>Anticancer Research</i> , Vol. 20, pp. 2525-2536 (2000)	
	7	Jeong, H., <i>et al.</i> , "Induction of Inducible Nitric Oxide Synthase Expression by 18 $\beta$ -glycyrrhetic Acid in Macrophages, <i>FEBS Letters</i> , Vol. 513., pp.208-212 (2002)	
	8	Kai, Kenzo, <i>et al.</i> , "Anti-inflammatory effects of Intramammary Infusions of Glycyrrhizin in Lactating Cows with Mastitis Caused by Coagulase-negative Staphylococci, <i>AJVR</i> , Vol. 64, No. 10, pp. 1213-1220 (2003)	
	9	Mishima, Mathiro et al., "Studies on glycyrrhetic acid and its derivatives as nasal absorption promoter of insulin," <i>Drug Delivery System</i> , p. 88.	
	10	Okada, Kenzo, <i>et al.</i> , "Identification of Antimicrobial and Antioxidant Constituents from Licorice of Rusian and Xhijiang Origin, <i>Chem. Pharm. Bull.</i> , Vol. 37, No. 9, pp. 2528-2530 (1989)	
	11	Sakagami, H., <i>et al.</i> , "Induction of Apoptosis by Flavones, Flavonols (3-Hydroxyflavones) and Isoprenoid-Substituted Flavonoids in Human Oral Tumor Cell Lines", <i>Anticancer Research</i> , Vol. 20, pp. 271-278 (2000)	
	12	Suzuki, H., <i>et al.</i> , "Effects of Glycyrrhizin on Biochemical Tests in Patients with Chronic Hepatitis," <i>Asian Med. J.</i> , Vol. 26, No. 7, pp. 423-438.	
	13	Utsunomiya, Tokuichiro <i>et al.</i> , "Glycyrrhizin (20 $\beta$ -carboxy-11-oxo-30-norolean-12-en-3 $\beta$ -yl-2-O- $\beta$ -D-glucopyranuronosyl- $\alpha$ -D-glucopyranosiduronic acid) improves the resistance of thermally injured mice to opportunistic infection of herpes simplex virus type 1," <i>Immunology Letters</i> , Vol. 44, pp. 59-66 (1995)	

Examiner Signature		Date Considered	
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<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language translation is attached.